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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/627,480 | 07/24/2003 | Thangavelu Asokan | 130507-1 | 4218 |

6147 7590 02/28/2005

GENERAL ELECTRIC COMPANY
GLOBAL RESEARCH
PATENT DOCKET RM. BLDG. K1-4A59
NISKAYUNA, NY 12309

EXAMINER

AFTERGUT, JEFF H

| ART UNIT | PAPER NUMBER |
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1733

DATE MAILED: 02/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/627,480

Applicant(s)

ASOKAN ET AL.

Examiner

Jeff H. Aftergut

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23-29, 31-36 and 38 is/are pending in the application.
4a) Of the above claim(s) 35, 36 and 38 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 23-29 and 31-34 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 23-29 and 31-34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 23, the applicant recites "disposing mica paper upon the electrically insulating backing" (line 3 of claim 23). At lines 4-5 the applicant recites "disposing polymeric resinous films on top and bottom sides of **the mica paper** to form a ground wall insulation tape" (emphasis added). It is not seen how one can dispose the mica paper adjacent the electrically insulating backing and then apply the polymeric resinous films to both sides of the mica paper. It is suggested, as described, that the applicant recite that the mica paper was first provided with the polymeric resinous films on the top and bottom sides thereof to form a ground wall insulation tape prior to application of the ground wall insulation tape to the electrically insulating backing of the wire as this is the correct order of the steps in the operation.

In claims 32-34, the applicant recites the language "the coating", however there is no coating defined in independent claim 23 from which these claims depend. It is suggested that the term "disposing" in claim 23, line 7 ("disposing a curable polymeric resin...") be changed to --coating—to resolve this problem.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 23-25, 28, 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent 56-145740 in view of either one of Bombicino (newly cited) or German Patent 1801053 (newly cited).

Japanese Patent '740 suggested that those skilled in the art at the time the invention was made would have applied a mica paper onto an electrically insulated

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backing of a wire followed by disposing a curable polymeric resin on the assembly. The applicant is referred to paragraphs 3 and 6 of the Office action dated September 2, 2004. the reference to Japanese Patent '740, as addressed by applicant in the response, failed to teach or suggest that those skilled in the art would have incorporated a mica tape which included a polymeric resinous film on both sides of the mica paper used in the operation.

The references to either one of Bombicino or German Patent '053 suggested that it was known at the time the invention was made to incorporate a polymeric resinous film on either side of a mica paper in order to provide additional support for the mica paper in the process of making the mica paper wherein the mica paper was intended to be used as insulation for a wire in a generator or stator assembly. More specifically, the reference to Bombicino suggested that those skilled in the art would have desired to provide a Mylar film 11 and 15 on either side of a mica paper 13 (wherein one disposed a glass cloth 14 on one side of the mica paper between the Mylar film 15 and the mica paper and one disposed a polyethylene sheet 12 between the mica paper and the other Mylar film). The reference suggested that those skilled in the art would have provided the mica paper with the films thereon in order to reinforce the same and provide the mica paper with the added tensile strength needed to render the tape useful as an insulation in a transformer, see column 1, lines 30-51, column 2, lines 20-47. clearly in order to impart the desired tensile strength to the mica paper in Japanese Patent '740, it would have been obvious to one of ordinary skill in the art to facilitate the handling of the mica paper by associating polymeric films to both sides of the mica paper. The

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reference to German Patent '053 suggested that those skilled in the art would have associated an adhesive tape support 1 on one side of a mica paper of resin and mica particles or powder 2 and preferably covered the opposite side of the mica paper with a similar adhesive tape 3As depicted in Figure 2, the mica paper with the films thereon was used in the winding of the manufacture of a transformer. Again, note that the inclusion of the films in German Patent '053 would have been useful in providing additional strength to the mica paper so that the same was suitable for winding about the material to be insulated (noting that in Japanese Patent '740 the tape was clearly wound about the material to be insulated prior to the impregnation with the curable coating). It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the techniques of either one of German Patent 1801053 or Bombicino in order to form a mica paper which had increased tensile strength such that it was better able to be wound to form a ground wall insulation in the operation of making an insulated wire as taught by Japanese Patent 56-145740.

Regarding claim 24, note that Japanese Patent '740 suggested the use of the insulating coating disposed on the wire prior to introduction of the mica and it would have been within the purview of the ordinary artisan to utilize the conventional insulating materials which would have included fibrous insulation. Regarding claim 25, note in Japanese Patent '740 the insulating backing was in fact wound about the wire. Additionally, one skilled in the art would have understood that the same was the conventional manner in which one applied the insulation to the wire. Regarding claim 28, note that both of German Patent 1801053 or Bombicino suggested that the mica

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material would have been impregnated with an adhesive (a resin) in the manufacture of the same. With respect to claim 31, note that winding with the tape of either one of polymer film covered tapes of German Patent 1801053 or Bombicino in the operation of Japanese Patent '740 (where the mica tape was applied to the insulated backing) would have resulted in the configuration as defined in claim 31 as the film of either one of German Patent 1801053 or Bombicino would have been disposed adjacent the wire insulation on one side thereof and adjacent the mica on the other side thereof.

Regarding claim 32, note that the reference to Japanese Patent '740 suggested that one would have impregnated the assembly after the winding operation wherein the impregnating resin was cross-linked.

5. Claims 26-28 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as set forth above in paragraph 4 further taken with Schulman et al '417 for the same reasons as expressed in paragraph 6 of the Office action dated September 2, 2004.

Regarding the amount of overlap and the thickness of the mica layer, the reference to Schulman '417 rendered the same obvious to one of ordinary skill in the art for the same reasons as previously presented.

6. Claim 29 rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent 56-145740 in view of Bombicino (newly cited) for the same reasons as expressed above in paragraph 4 optionally further taken with Rogers, Jr. 150.

With respect to claim 29, note that the reference to Japanese Patent '740 failed to teach or suggest that one skilled in the art would have incorporated a mica tape with

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a glass backing. To further evidence that such a glass backing was known per se in a tape having two films thereon, the reference to Bombicino is cited. The reference suggested that those skilled in the art would have incorporated a glass cloth 14 as a backing material adjacent the mica 13 in an insulating tape. For the same reasons as expressed above in paragraph 4 (i.e. to provide a mica tape with enhanced tensile strength), it would have been obvious to employ the insulating mica tape of Bombicino in the operation of making an insulated article as taught by Japanese Patent 56-145740.

To further evidence that those skilled in the art of manufacturing a mica tape would have incorporated a glass fabric in the manufacture of the mica tape, the reference to Rogers '150 is cited. Applicant is referred to paragraph 7 of the Office action dated September 2, 2004 for a complete discussion of the reference to Rogers '150. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a glass backing with the mica material in order to increase the tensile strength of the mica material (the paper or tape) as suggested by Rogers '150 in the process of making an insulating tape for an article which was provided with the insulating tape thereon as suggested by the combination of Bombicino and Japanese Patent 56-145740.

7. Claims 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as set forth above in paragraph 4 further taken with Lewis et al '302 for the same reasons as expressed in paragraph 8 of the Office action dated September 2, 2004.

The use of a silicone resin as well as the dipping of the assembly in the resin to facilitate impregnation of the assembly with the specified resin would have been obvious to one of ordinary skill in the art for the reasons previously presented. Applicant is referred to the previous Office action for a complete discussion of the reference to Lewis '302.

Election/Restrictions

8. Claims 35, 36, and 38 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on July 7, 2004.

Response to Arguments

9. Applicant's arguments with respect to claims 23-29 and 31-34 have been considered but are moot in view of the new ground(s) of rejection.

The applicant essentially argues that the prior art previously applied failed to teach that the mica would have had a polymeric resin film disposed on either side of the mica. While it is agreed that the prior art previously applied failed to expressly state that the mica would have been disposed between two polymer resinous films, the newly cited references to either one of Bombicino or German Patent '053 clearly suggested that those versed in the art would have incorporated a the recited films on either side of the mica tape in order to ensure that the mica tape had adequate tensile strength for winding about the wire in the operation of insulating the same. As applicant has

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amended the claims to recite this feature for the first time, it is deemed appropriate to make this office action FINAL.

Applicant does not argue any of the other references other than to state that the previously applied references failed to teach the use of two films where one film was disposed on each side of the mica paper. As such it is believed that but for the lack of the recited films applicant agreed with the Office interpretation of the prior art references applied. As such, and since the references to either one of Bombicino or German Patent '053 suggested the use of the resin films on either side of the mica, the claimed invention is believed to have been obvious to one of ordinary skill in the art (in order to provide a mica paper with enhanced tensile strength prior to winding the same).

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

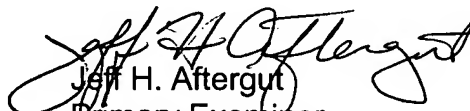
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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff H. Aftergut whose telephone number is 571-272-1212. The examiner can normally be reached on Monday-Friday 7:15-345 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on 571-272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jeff H. Aftergut
Primary Examiner
Art Unit 1733

JHA
February 24, 2005